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News Release

NEW STUDY EXAMINES IMPACT OF 7.7 MAGNITUDE EARTHQUAKE ON STATES IN NEW MADRID SEISMIC ZONE

-Areas nearest NMSZ would experience widespread and catastrophic physical damage, negative social impacts and economic losses; states include Alabama, Arkansas, Illinois, Indiana, Kentucky, Mississippi, Missouri and Tennessee.

WASHINGTON ó The Department of Homeland Security's Federal Emergency Management Agency (FEMA) today released a report, *Impact of Earthquakes on the Central USA*, which presents the findings of a two-year study on the impact of a 7.7 magnitude earthquake on states in the New Madrid Seismic Zone (NMSZ). The study was conducted for FEMA by the Mid-America Earthquake (MAE) Center at the University of Illinois in partnership with the Central United States Earthquake Consortium (CUSEC), the U.S. Geological Survey (USGS), the U.S. Army Corps of Engineers (USACE), and George Washington University's Institute for Crisis, Disaster and Risk Management.

The study, the first of its kind to be conducted on such a large scale, is part of FEMA's NMSZ Catastrophic Earthquake Disaster Response Planning Initiative. It is primarily intended to provide scientific data upon which to base response and recovery planning for the devastating earthquakes that have long been predicted for the New Madrid region, which includes areas of Alabama, Arkansas, Illinois, Indiana, Kentucky, Mississippi, Missouri and Tennessee. The study is available for download at <http://mae.ce.uiuc.edu>, click on the second small screen on the left or wait for and click on the headline "New Comprehensive Report on Earthquakes in the Central USA."

According to the study, areas within the NMSZ would experience widespread and catastrophic physical damage, negative social impacts, and economic losses. Three different earthquake events were considered, one for each segment of the New Madrid Fault ó northeast, central and southwest. For example, an earthquake event that occurs in the southwestern part of the seismic zone would cause significant damage in northeast Arkansas, northwest Mississippi, western Tennessee and portions of western Kentucky, and is likely to cause damage to the greatest number of homes and affect the largest number of people. The study notes that the total economic impact of a series of NMSZ earthquakes is likely to constitute the highest economic losses due to a natural disaster in the United States.

The report provides state-specific information, including damage levels specific to building and occupancy type; essential facilities; highway bridges; electric power, potable water, waste water and communications facilities; and pipeline damage where appropriate. It also identifies the counties that could be expected to sustain the most damage in each state and provides information on potential

interruptions of utility services and impacts on essential facilities, such as hospitals, schools, emergency operations centers, and police and fire stations.

The assessments provided in the study have been used to facilitate earthquake response operations planning sessions in 30 FEMA-supported workshops, conducted with the 747 counties and the eight states in the NMSZ. The workshops were designed to support the development of integrated state and local plans for response and recovery operations following a catastrophic earthquake. Participants included more than 3,800 representatives of federal, state, tribal, local and county emergency management and responder organizations, as well as the private sector.

Additional planning workshops are scheduled, including FEMA regional- and national-level workshops. A capstone workshop will involve the integration of all the plans developed through the scenario-based workshops.

The scenarios for the workshops were developed using FEMA's Hazards U.S. Multi-Hazard (HAZUS-MH) earthquake impact modeling software. HAZUS-MH is a tool used to assess risk and provide estimates of hazard-related damage and takes into account various impacts of a hazard event, such as the physical damage, economic loss and social impacts resulting from earthquakes, floods and hurricanes.

Earthquake Resources from FEMA

Are You Ready? Earthquakes www.fema.gov/areyouready/earthquakes

Earthquake: How can I protect myself? www.fema.gov/hazard/earthquake

HAZUS-MH Earthquake Model www.fema.gov/plan/prevent/hazus/hz_eq.shtm

FEMA coordinates the federal government's role in preparing for, preventing, mitigating the effects of, responding to, and recovering from all domestic disasters, whether natural or man-made, including acts of terror.

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